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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/572,996

03/23/2006

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EXAMINER

BEATTY, ROBERT B

ART UNIT

PAPER NUMBER

2852

MAIL DATE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/572,996	Applicant(s) SCHULTHEIS ET AL.	
	Examiner Robert B. Beatty	Art Unit 2852	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 14-17 and 20-22 is/are rejected.
- 7) ☒ Claim(s) 9-13, 18 and 19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/29/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

2. Claims 1-22 are objected to because of the following informalities:

in all the claims, the reference numerals should be deleted;

in claims 7,11,13 and 16, line 3; and claims 20 and 22, line 2, the phrase "rolls off" is grammatically awkward;

in the specification, the term " d_{50vol} " should be defined;

Appropriate correction is required.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-2,4-5,14 are rejected under 35 U.S.C. 102(b) as being anticipated by Murakami et al. (JP# 06-222657).

Murakami et al. teach a developing device comprising a developer belt (tape) 16 entrained around support rollers 17, 18, the belt being in contact with a photoconductor 14,15 in a contact region between the two support rollers, and a toner supply roller 5a for applying toner to the developer tape (see Fig. 1). As seen in Fig. 4, a discharge brush 21 is applied to the contact region so as to charge the

toner material (translation is unavailable at this time but this description is supported by the preliminary examination report submitted with this application).

4. Claims 1-2,4, 20-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Tsukamoto (JP# 10-312113).

Tsukamoto teach a developing device comprising a developer belt (tape) 51 entrained around support rollers 52,53,54,, the belt being in contact with a photoconductor 1 in a contact region between the two support rollers 53,54, and a toner supply device 57 for applying toner to the developer tape (see Fig. 1). A metering roller 60 is located downstream of the supply device 57 but upstream of the contact region, and is used to remove part of the toner material from the developer tape (see Fig. 4). The metering roller rests against support roller 52 with the developer tape between them.

5. Claims 1 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Hays et al.

Hays et al. teach a developing device comprising a developer belt (tape) 18 entrained around support rollers 20,22, the belt being in contact with a photoconductor 26 in a contact region at the support rollers 22, and a toner supply device 12 for applying toner to the developer tape (see Fig. 1). A tensioning device 24 is connected to the support roller 22 to tension the developer tape.

6. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Kuehnle.

Kuehnle teach a developing device comprising a developer belt (tape) 14 entrained around support rollers 16, 18, the belt being in contact with a photoconductor 50,52 in a contact region between the two support rollers, and a toner supply applicator (supply of toner 12 contained in the developing device housing) for applying toner to the developer tape (see Fig. 1). Support rollers 16,18 are in contact with the photoreceptor (with the belt between them).

7. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Doutney.

Doutney teach a developing device comprising a developer belt (tape) 53 entrained around support rollers 59, the belt being in contact with a photoconductor 14,16 in a contact region between two of the support rollers, and a toner supply applicator (supply of toner 52 contained in the developing device housing 44) for applying toner to the developer tape . Two of the support rollers 59 are in contact with the photoreceptor (with the belt between them).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 6-8,15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murakami et al. (JP# 06-222657) in view of Hays et al.

Murakami et al. taught supra discloses most of what is claimed except the charging (discharging) device being a corona device or bias roller rather than the discharge brush used in Murakami et al. In addition, using a tensioning device for the developer tape is not taught. Hays et al. teach a developing device comprising a developer belt (tape) 18 entrained around support rollers 20,22, the belt being in contact with a photoconductor 26 in a contact region at the support rollers 22, and a toner supply device 12 for applying toner to the developer tape (see Fig. 1). A tensioning device 24 is connected to the support roller 22 to tension the developer tape. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a tensioning device for the developer belt because any slackness of the belt over time can be compensated for which would improve driving of the belt and therefore the developer operation. In addition, the use of a corona or bias roller in lieu of a brush in order to charge (discharge) a surface is notoriously

well known functional equivalent in the electrophotography art for the purpose of applying or removing charge of which the examiner takes Official Notice.

9. Claims 9-13,18,19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Funayama et al., Uno (JP), Komatsubara (JP), Murakami (JP'279), and Hiraoka (JP) all teach various developer belt applicators.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Beatty whose telephone number is (571) 272-2130. The examiner can normally be reached on M-F from 9 to 6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Gray, can be reached on (571) 272-2119. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

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published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR

only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>.

Should you have questions on access to the Private PAIR system, contact the

Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Robert Beatty/
Primary Examiner
Art Unit 2852
July 11, 2008